

REMARKS

I. Introduction

Claims 1-22 are pending in this case. Claims 4, 9, 10, 11, 15, 20, 21, and 22 are withdrawn from consideration.

The Examiner rejects claims 12 and 13 under 35 U.S.C. § 102(b) as being anticipated by Aoyama et al. Japanese Patent Publication No. 11-229691 (hereinafter "Aoyama") or Arnold et al. U.S. Patent 5,180,038 (hereinafter "Arnold"). The Examiner rejects claims 1 and 2 under 35 U.S.C. § 103(a) as being unpatentable over Aoyama in view of Kurachi et al. U.S. Patent 6,322,114 (hereinafter "Kurachi"), or, alternatively, Kurachi in view of Aoyama. The Examiner rejects claims 3 and 5 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Aoyama and Kurachi. The Examiner rejects claims 14 and 16 under 35 U.S.C. § 103(a) as being unpatentable over either one of Aoyama or Arnold. The Examiner rejects claims 6-8 and 10 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Aoyama and Kurachi further in view of Moh et al. U.S. Patent 5, 382,890 (hereinafter "Moh"). The Examiner rejects claims 17-19 and 21 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Aoyama and Kurachi further in view of Moh.

Applicant has amended independent claims 1, 6, 7, 12, 16, 17, and 18 to more particularly define Applicant's invention and to correct typographical errors. Applicant submits that no new matter has been added. What is more, Applicant respectfully disagrees with the Examiner's above-identified rejections and assertions. Applicant respectfully traverses the Examiner's rejections and assertions as follows:

II. Applicant's Invention

Applicant's invention, as defined by independent claims 1 and 12, is directed toward systems and methods for providing improved reliability in an aircraft door flight lock actuator. This is accomplished by storing energy provided to the actuator in a mechanical energy storage means and an electrical energy storage means during powering of the actuator. In the event of a failure by the mechanical energy storage means, the actuator is powered using the energy stored in the electrical energy storage means to complete an unlocking stroke in the absence of power.

III. Claims 1-3, 5-8, and 10

The Examiner rejects claims 1 and 2 under 35 U.S.C. § 103(a) as being unpatentable over Aoyama in view of Kurachi, or, alternatively, Kurachi in view of

Aoyama. The Examiner rejects claims 3 and 5 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Aoyama and Kurachi. The Examiner rejects claims 6-8 and 10 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Aoyama and Kurachi further in view of Moh. The Examiner's rejections are respectfully traversed.

Applicant submits that independent claim 1 is patentable over Aoyama and Kurachi at least because the combination of these references completely fail to show or even suggest all the features and/or elements of claim 1.

Specifically, Aoyama refers to an actuator in which a mechanical spring is provided to store energy using the displacement of the output shaft in the direction of movement powered by the motor. The energy stored in the spring is used to power the movement of the output shaft in the opposite direction. A power generation braking circuit is used to brake the output shaft during movement of the output shaft powered by the mechanical spring.

On the other hand, Kurachi refers to a latch unit for preventing disengagement in an aircraft door.

Applicant submits that neither Aoyama or Kurachi shows or suggests Applicant's claimed method of storing energy in a mechanical energy storage means and an electrical energy storage means during powering of the actuator. In contrast, Aoyama merely shows the compression

of a mechanical spring during the powered stroke of the output shaft, but Aoyama fails to show or suggest that energy is stored in an electrical energy storage means during its powered stroke (which compresses the mechanical spring).

Furthermore, Applicant submits that neither Aoyama or Kurachi shows or suggests Applicant's claimed method of powering the actuator using the energy stored in the electrical energy storage means to complete an unlocking stroke in the absence of power. First, Aoyama completely fails to show an electrical storage means in its actuator system. Even if an electrical storage means was contemplated in Aoyama, it is neither shown nor suggested that such an electrical storage means is used to power the actuator in the absence of main power and in the event of a failure by its mechanical spring.

Therefore, for at least the foregoing reasons, Applicant respectfully submits that independent claim 1 is patentable over Aoyama and/or Kurachi, either alone or in combination. Applicant further submits that claims 2, 3, and 5-8, which depend from independent claim 1, are patentable at least because claim 1 is patentable.

IV. Claims 12-14, 16-19, and 21

The Examiner rejects claims 12 and 13 under 35 U.S.C. § 102(b) as being anticipated by Aoyama or Arnold. The Examiner rejects claims 14 and 16 under 35 U.S.C. § 103(a) as being unpatentable over either one of Aoyama or Arnold. The Examiner rejects claims 17-19 and 21 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Aoyama and Kurachi further in view of Moh. Again, the Examiner's rejections and assertions are respectfully traversed as follows:

The Examiner contends that Applicant's claims are "replete with statements . . . of intended or desired use" (Office Action, page 3, ¶ 2). Applicant respectfully submits that Applicant's claims 17-19 are means-plus-function claims that set forth limitations based on the desired function of the apparatus. Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of equivalence under the guidelines set forth in MPEP § 2183, which requires that the prior art element perform the function specified in the claim. Furthermore, function in a means-plus-function limitation must be construed to include the limitations contained in the claim language (see MPEP § 2182, ¶ 3).

In view of the previous discussion regarding Aoyama, Applicant submits that independent claim 12 is

patentable over Aoyama at least because that reference fails to show or suggest means for powering the actuator using the energy stored in the electrical energy storage means to complete an unlocking stroke in the absence of power. In contrast, the motor of Aoyama is not powered in the absence of main power. Therefore, Aoyama completely fails to perform the function specified by Applicant's means-plus-function limitation and cannot be considered equivalent means.

Similarly, Arnold fails to show or suggest means for performing the function of storing energy provided to the actuator in an electrical energy storage means during powering of the actuator. Although Arnold refers to an automobile battery, Applicant's claimed electrical energy storage means functions to store energy provided to the actuator. Applicant's claimed electrical energy storage means exists within the context of the actuator and functions to store electrical energy provided to the actuator. Therefore, the battery referred to in Arnold does not perform the function specified by Applicant's claim 12 and cannot be considered an equivalent means.

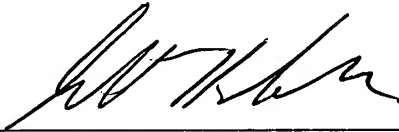
Accordingly, for at least the foregoing reasons, Applicant submits that independent claim 12 is patentable over each of Aoyama and Arnold. Applicant further submits that claims 13, 14, and 16-19, which depend from

independent claim 12, are patentable at least because claim 12 is patentable.

IV. Conclusion

In view of the foregoing, this application is in condition for allowance. Reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,



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